

CLAIMS

1. A separating agent for chromatography using a polysaccharide derivative derived from a polysaccharide, wherein:

5 the polysaccharide derivative has a structure in which part of hydroxyl groups present in the polysaccharide are crosslinked one another through a crosslinking molecule and non-crosslinked hydroxyl groups present in the polysaccharide are each modified with a modifying molecule;
10 and

the polysaccharide derivative is not carried on a carrier.

2. The separating agent for chromatography according to
15 claim 1, wherein the polysaccharide is cellulose.

3. The separating agent for chromatography according to claim 1, wherein the polysaccharide is amylose.

20 4. The separating agent for chromatography according to any one of claims 1 to 3, wherein the crosslinking through a crosslinking molecule is performed between a hydroxyl group at 6-position of a pyranose ring or furanose ring and a hydroxyl group at 6-position of another pyranose ring or
25 furanose ring.

5. The separating agent for chromatography according to

any one of claims 1 to 4, wherein the crosslinking molecule is a compound having a plurality of isocyanate groups in a molecule.

5 6. The separating agent for chromatography according to any one of claims 1 to 5, wherein the modifying molecule is a compound having one isocyanate group in a molecule.

10 7. The separating agent for chromatography according to any one of claims 1 to 6, which is formed into a form of beads.

15 8. The separating agent for chromatography according to any one of claims 1 to 7, which has pores.

9. A process for producing a separating agent for chromatography, comprising the steps of:

 introducing protective groups into part of hydroxyl groups present in a polysaccharide;

20 modifying with a modifying molecule each of hydroxyl groups remained in the polysaccharide having the protective groups introduced;

 releasing the introduced protective groups to recover the hydroxyl groups; and

25 crosslinking the recovered hydroxyl groups to one another through a crosslinking molecule.

10. The process for producing a separating agent for chromatography according to claim 9, further comprising the steps of:

dissolving in a solvent a recovered polysaccharide derivative obtained by recovering the hydroxyl groups in the release step;

dispersing a porogen in an obtained solution of recovered polysaccharide derivative;

maintaining in a desired form the solution of recovered polysaccharide derivative having the porogen dispersed and removing the solvent to form the recovered polysaccharide derivative in a desired form; and

washing the formed recovered polysaccharide derivative with a washing solvent capable of dissolving the porogen.

11. The process for producing a separating agent for chromatography according to claim 9, wherein the crosslinking step comprises the steps of:

forming a recovered polysaccharide derivative in a form of beads by dissolving in a solvent the recovered polysaccharide derivative obtained by recovering the hydroxyl groups in the modification step to form a solution of recovered polysaccharide derivative, by dropping the solution of recovered polysaccharide derivative into a solution of surfactant, and by stirring the whole; and crosslinking the recovered polysaccharide

derivative in a form of beads through a crosslinking molecule to form a separating agent for chromatography in a form of beads.

5 12. The process for producing a separating agent for chromatography according to claim 11, further comprising the steps of:

 dispersing a porogen in the solution of recovered polysaccharide derivative in the beads formation step; and

10 washing the formed recovered polysaccharide derivative in a form of beads with a washing solvent capable of dissolving the porogen.

15 13. A process for producing a separating agent for chromatography, comprising the steps of:

 crosslinking part of hydroxyl groups present in the polysaccharide to one another through a crosslinking molecule; and

20 modifying with a modifying molecule each of hydroxyl groups remained in the polysaccharide crosslinked through the crosslinking molecule.

25 14. The process for producing a separating agent for chromatography according to claim 13, wherein the polysaccharide crosslinked through the crosslinking molecule in the crosslinking step is formed into a form of beads.